AMENDMENTS TO THE CLAIMS

1-10. (Canceled)

11. (Currently amended) A non-volatile memory cell comprising:

a germanium selenide glass ~~doped with~~ comprising silver, said ~~silver doping being in a concentration which maintains said~~ germanium selenide glass ~~in the glass forming region~~ having the formula $(Ge_xSe_{1-x})_{1-y}Ag_y$, wherein $39 \leq x \leq 42$ and y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in a non-crystalline state; and

a first electrode and a second electrode ~~in contact with~~ electrically coupled to said ~~doped~~ germanium selenide glass~~; and~~.

~~a dendrite formed between said first and second electrodes when voltage is applied to said first and second electrodes.~~

12-23. (Canceled)

24. (Currently amended) A memory cell comprising:

a germanium selenide glass comprising silver, said germanium selenide glass having the formula ~~$(Ge_{x1}Se_{1-x1})_{1-y1}Ag_{y1}$~~ $(Ge_xSe_{1-x})_{1-y}Ag_y$, wherein $18 \leq$ ~~x_1~~ $x \leq 28$ and ~~wherein said silver is in a concentration which maintains said germanium selenide glass in the glass forming region~~ y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in a non-crystalline state; and[[,]]

at least two electrodes ~~in contact with~~ electrically coupled to said germanium selenide glass~~, said germanium selenide glass forming a dendrite between at~~

~~least two electrodes in response to a voltage applied across said at least two electrodes~~.

25. (Currently amended) A memory cell comprising:

a germanium selenide glass having the formula ~~$(Ge_{x2}Se_{1-x2})_{1-y2}Ag_{y2}$~~ $(Ge_xSe_{1-x})_{1-y}Ag_y$, wherein ~~$39 \leq x_2 \leq 42$~~ x is about 40 and ~~wherein said silver is in a concentration which maintains maintains~~ y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in ~~the glass forming region~~ a non-crystalline state; and

at least two electrodes ~~in contact with~~ electrically coupled to said germanium selenide glass~~, said germanium selenide glass forming a dendrite between at least two electrodes in response to a voltage applied across said at least two electrodes~~.

26. (Canceled)

27. (Currently amended) A method of forming a memory cell comprising the steps of:

providing a germanium selenide glass having the formula ~~$(Ge_{x2}Se_{1-x2})_{1-y2}Ag_{y2}$~~ $(Ge_xSe_{1-x})_{1-y}Ag_y$, wherein ~~$18 \leq x_1$~~ $x \leq 28$ over a substrate, and ~~wherein said silver is in a concentration which maintains~~ y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in ~~the glass forming region~~ a non-crystalline state; and[[,]]

forming at least two electrodes ~~in contact with~~ electrically coupled to said germanium selenide glass at locations which permit said glass to transition

between high and low resistance states in response to signals applied to said electrodes.

28. (Currently amended) The method of claim 27, wherein x_1=23.

29. (Currently amended) The method of claim 27, wherein x_1=25.

30. (Currently amended) The method of claim 27, wherein x_1=20.

31. (Currently amended) A method of forming a memory cell, comprising ~~the steps of~~:

providing a germanium selenide glass having the formula ~~$(Ge_{x2}Se_{1-x2})_{1-y2}Ag_{y2}$~~ (Ge_xSe_{1-x}), wherein $39 \leq$ ~~x_2~~ $x \leq 42$; and ~~wherein said silver is in a concentration which maintains~~ adding an amount of silver to said germanium selenide glass corresponding to a stoichiometric amount suitable to maintain said germanium selenide glass in ~~the glass forming region~~ a non-crystalline state; and,

~~forming~~ providing at least two electrodes ~~in contact with~~ electrically coupled to said germanium selenide glass at locations which permit ~~said glass to transition between high and low resistance states in response to signals applied to said electrodes~~ said electrodes to apply bipolar charge across said germanium selenide glass.

32. (Currently amended) A method of operating a memory cell, comprising ~~the steps of~~:

applying a voltage across a germanium selenide glass having the formula ~~$(Ge_{x1}Se_{1-x1})_{1-y1}Ag_{y1}$~~ $(Ge_xSe_{1-x})_{1-y}Ag_y$, wherein $18 \leq$ ~~x_1~~ $x \leq 28$ and ~~wherein said silver is in a concentration which maintains~~ y corresponds to a stoichiometric

amount of silver suitable to maintain said germanium selenide glass in ~~the glass forming region~~ a non-crystalline state, ~~to change the~~ said voltage application changing a resistance state of said glass.

33. (Currently amended) The method of claim 32, wherein x_1=23.

34. (Currently amended) The method of claim 32, wherein x_1=25.

35. (Currently amended) The method of claim 32, wherein x_1=20.

36. (Currently amended) A method of operating a memory cell, comprising ~~the steps of~~:

applying a voltage across a germanium selenide glass having the formula ~~$(Ge_{x2}Se_{1-x2})_{1-y2}Ag_{y2}$~~ $(Ge_xSe_{1-x})_{1-y}Ag_y$, wherein $39 \leq$ ~~x_2~~ $x \leq 42$ and ~~wherein said silver is in a concentration which maintains~~ y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in ~~the glass forming region~~ a non-crystalline state, ~~to change the~~ said voltage application changing a resistance state of said glass.

37. (Currently amended) A processor system comprising:

a processor; and

an integrated circuit coupled to said processor, at least one of said processor and integrated circuit including a memory cell, said memory cell comprising:

a germanium selenide glass having the formula ~~$(Ge_{x1}Se_{1-x1})_{1-y1}Ag_{y1}$~~ $(Ge_xSe_{1-x})_{1-y}Ag_y$, wherein $18 \leq$ ~~x_1~~ $x \leq 28$ and ~~wherein said silver is in a concentration which maintains~~ y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in ~~the glass forming region~~ a non-

crystalline state; and

at least two electrodes ~~in contact with~~ electrically coupled to said ~~doped~~ germanium selenide glass, said germanium selenide glass changing a resistance state in response to application of a voltage across said at least two electrodes.

38. (Original) The processor system of claim 37, wherein said processor and said integrated circuit are integrated on same chip.

39. (Currently amended) The processor system of claim 37, wherein x_1=23.

40. (Currently amended) The processor system of claim 37, wherein x_1=25.

41. (Currently amended) The processor system of claim 37, wherein x_1=20.

42. (Currently amended) A processor system comprising:

a processor; and

an integrated circuit coupled to said processor, at least one of said processor and integrated circuit including a memory cell, said memory cell comprising:

a germanium selenide glass having the formula ~~$(Ge_{x2}Se_{1-x2})_{1-y2}Ag_{y2}$~~ $(Ge_xSe_{1-x})_{1-y}Ag_y$, wherein $39 \leq$ ~~x_2~~ $x \leq 42$ and ~~wherein said silver is in a concentration which maintains~~ y corresponds to a stoichiometric amount of silver suitable to maintain said germanium selenide glass in ~~the glass forming region~~ a non-crystalline state; and

at least two electrodes ~~in contact with~~ electrically coupled to said ~~doped~~ germanium selenide glass, said germanium selenide glass changing a

resistance state in response to application of a voltage across said at least two electrodes.

43. (Original) The processor-based system of claim 42, wherein said processor and said integrated circuit are integrated on same chip.